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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Bernd Frey

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KENYON & KENYON LLP
ONE BROADWAY
NEW YORK, NY 10004

EXAMINER

ZHANG, JUE

ART UNIT

PAPER NUMBER

2838

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/561,724	Applicant(s) FREY ET AL.	
	Examiner JUE ZHANG	Art Unit 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7 and 9-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7, 9-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office action is in answer to the response filed on 5/28/2009. Claims 7, 9-16 are pending, of which original claims 7, 12 are amended, and claim 16 is newly added by the present amendment.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 7, 9-12, 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Muramatsu (US Patent No. 4678998, hereinafter '998).

Claim 7, '998 teaches a device and method for predicting a remaining lifetime of an electric energy storage (Abstract; Fig. 1-5 and corresponding texts including col. 3 line 33-col. 4 line 7...) comprising:

adapting continuously a parameter of the mathematical model to a real value over the lifetime of the energy storage mechanism (Abstract; Fig. 3),

defining the remaining lifetime as a time until reaching any definable limiting values for one of a minimum efficiency and a minimum storage capacity (Fig. 3); indicating the remaining lifetime (Abstract; Fig. 3 and corresponding texts); and

when a level falls below a preselectable threshold for the remaining lifetime, providing a warning (col. 3, lines 33-col. 4 line 7)(Abstract; Fig. 3-5 and corresponding texts).

performing extrapolation via the mathematical model (Fig. 3);

determining at regular intervals the remaining lifetime based on the extrapolation (Abstract; Fig. 3), wherein the parameter of the mathematical model is adapted between the regular intervals, and wherein the remaining lifetime is defined as a time until reaching any definable limiting values for one of a minimum efficiency and a minimum storage capacity (Step 15-19, Fig. 3)(Abstract; Fig. 1-5 and corresponding texts);

Claim 12, '998 teach the limitations of claim 7 as discussed above. '998 further teaches the device further comprising a display; a memory; and a processor is programmed to perform the above method (Abstract; Fig. 1-5).

For claim 9, '998 further teaches calculating and storing at least one of a value for an efficiency of the energy storage mechanism and a value for a storage capacity of the energy storage mechanism at regular intervals on the basis of the mathematical model (Abstract; Fig. 1-5).

For claim 10, '998 teaches the limitations of claim 9 as discussed above. '998 further teaches that the at least one of the value for the efficiency of the energy storage mechanism and the value for the storage capacity of the energy storage mechanism are based on at least one of a specifiable charge state and a temperature (Abstract; Fig. 1-5).

For claim 11, '998 teaches the limitations of claim 10 as discussed above. '998 further teaches that the remaining lifetime is determined by extrapolation from the at least one of the value for the efficiency of the energy storage mechanism and the value for the storage capacity of the energy storage mechanism and from a minimum value required for a particular application (col. 10-11)(Abstract; Fig. 1-5).

For claim 13, '998 teaches the limitations of claim 7 as discussed above. '998 further teaches that wherein the electric energy storage mechanism includes a battery in a motor vehicle (col. 10-11)(Abstract; Fig. 1-5).

Claim 14, '998 teach the teaches the claimed inventions as discussed above. '998 further teaches that providing a warning when a level falls below a preselectable threshold for at least one of the efficiency of the energy storage mechanism and the storage capacity of the energy storage mechanism (Abstract; Fig. 1-5).

Claim 15, '998 teach the teaches the claimed inventions as discussed above. '998 further teaches that wherein at least one of a value for an efficiency of the energy storage mechanism and a value for a storage capacity of the energy storage mechanism at regular intervals is determined based on the mathematical model and stored, wherein the at least one of the value for the efficiency of the energy storage mechanism and the value for the storage capacity of the energy storage mechanism are based on at least one of a specifiable charge state and a temperature, and wherein the remaining lifetime is determined by extrapolation from the at least one of the value for the efficiency of the energy storage mechanism and the value for the storage capacity

of the energy storage mechanism and from a minimum value required for a particular application (col. 10-11) (Abstract; Fig. 1-5 and corresponding texts).

Claim 16, '998 teaches the teaches the claimed inventions as discussed above. '998 further teaches that calculating and storing at least one of a value for an efficiency of the energy storage mechanism and a value for a storage capacity of the energy storage mechanism at regular intervals on the basis of the mathematical model (Abstract; Fig. 1-5); and providing a warning when a level falls below a preselectable threshold for at least one of the efficiency of the energy storage mechanism and the storage capacity of the energy storage mechanism (col. 3, lines 33-col. 4 line 7) (Abstract; Fig. 1-5); wherein the at least one of the value for the efficiency of the energy storage mechanism and the value for the storage capacity of the energy storage mechanism are based on at least one of a specifiable charge state and a temperature, wherein the remaining lifetime is determined by extrapolation from the at least one of the value for the efficiency of the energy storage mechanism and the value for the storage capacity of the energy storage mechanism and from a minimum value required for a particular application, and wherein the electric energy storage mechanism includes a battery in a motor vehicle (col. 10-11)(Abstract; Fig. 1-5).

Response to Amendment

4. Applicant's arguments filed 5/28/2009 have been fully considered but are moot in view of a new ground of rejection above.

Examiner's Note:

5. Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in their entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

6. In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUE ZHANG whose telephone number is (571)270-1263. The examiner can normally be reached on M-Th 7:30-5:00PM EST, Other F 7:30AM-5:00PM EST

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Monica Lewis can be reached on 571-272-1838. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JZ

*/Bao Q. Vu/
Primary Examiner, Art Unit 2838
September 8, 2009*